

What is claimed is:

1. A method, for use in wireless Internet, which extends an established resource reservation path between a mobile host (MH) and a correspondent host (CH), the MH moving across cells, each of the cells having a base station (BS) therein and the established resource reservation path being made between the MH and the CH through an initial BS located in an initial cell where the MH is currently located, the method comprising the steps of:

(a) establishing pseudo reservation paths (PRPs) between the initial BS and its neighboring BSs, one PRP being established between the initial BS and each of the neighboring BSs;

(b) once the MH moves into one of the neighboring cells of the initial cell, activating a PRP established for a neighbor BS, the neighbor BS being located in said one of the neighboring cells, and concatenating the activated PRP with the established resource reservation path to thereby establish a concatenated path between the MH and the CH through the initial BS and the neighbor BS; and

(c) establishing the optimized resource reservation path.

2. The method of claim 1, wherein no traffic is delivered through a PRP until concatenated.

3. The method of claim 1, wherein, when the MH is a sender, the step (a) includes the steps of:

(a1) sending a CRP (Concatenation of Reservation Path) inform message from the initial BS to the neighboring BSs, the CRP inform message including Tspec which defines traffic characteristics of a data flow to be generated by the MH;

(a2) delivering a RSVP path message from each of the neighboring BSs to the initial BS, the RSVP path message including the Tspec; and

(a3) sending a RSVP resv message from the initial BS to each of the neighboring BSs, thereby establishing the PRPs.

4. The method of claim 1, wherein, when the MH is a receiver, the step (a) includes the steps of:

(a4) delivering a RSVP (resource reservation setup protocol) path message from the initial BS to each of the neighboring BSs in order to establish the PRPs between the initial BS and the neighboring BSs; and

(a5) sending a RSVP resv message from each of the neighboring BSs to the initial BS, thereby establishing the PRPs.

5. The method of claim 1, wherein the step (b) includes the steps of:

(b1) sending a CRP activate message from the neighbor BS to the initial BS to activate the PRP established therebetween;

5 (b2) concatenating the activated PRP with the established resource reservation path; and

(b3) terminating the established PRPs excepting the activated PRP.

10 6. The method of claim 1, wherein, when the MH is a sender, the step (c) includes the steps of:

(c1) sending a RSVP path message from the neighbor BS to the initial BS and the CH by using a multicast address of an existing RSVP session in order to make the neighbor BS join in the existing RSVP session;

15 (c2) in response to the RSVP path message, sending a RSVP resv message from the CH to the neighbor BS, thereby making the neighbor BS join in the existing RSVP session not via the initial BS;

20 (c3) delivering a CRP release message from the neighbor BS to the initial BS to terminate the activated PRP therebetween; and

(c4) sending a RSVP path teardown message from the initial BS to the CH in order to terminate the established resource reservation path between the CH and the initial BS.

25

7. The method of claim 1, wherein, when the MH is a receiver,

the step (c) includes the steps of:

(c5) sending an IGMP (Internet Group Management Protocol) report message from the neighbor BS to a gateway router to make the neighbor BS join in an IP (Internet protocol) multicast group;

(c6) directly delivering a RSVP path message from the CH to the neighbor BS, the RSVP path message identifying a flow for a new destination;

(c7) in response to the RSVP path message, sending a RSVP resv message from the neighbor BS to the CH, thereby making the neighbor BS participate in an existing multicast RSVP session;

(c8) delivering a CRP release message from the neighbor BS to the initial BS to terminate the activated PRP therebetween; and

(c9) sending a RSVP path teardown message from the initial BS to the CH to terminate the established resource reservation path.

8. The method of claim 1, wherein the BS for each cell directly communicates with a gateway router connected thereto.

9. The method of claim 8, wherein the gateway router does not need to know whether a RSVP (resource reservation setup protocol) session is a pseudo reservation or not.

10. The method of claim 1, wherein only one inter-routing-domain PRP is established between two neighboring routing domains.

5

11. The method of claim 1, wherein the method is built on a RSVP.

10

12. The method of claim 1, wherein the method is applied within a routing domain.

13. The method of claim 12, wherein the method is further applied between two different routing domains.

15

14. The method of claim 1, wherein the BS for each cell carries out the method as an agent of the MH.